PREOBRAZHENSKIY, V.S.; FADEYEVA, N.V.; MUKHINA, L.I.

Taking into account heat and moisture correlation in conducting studies for making medium-scale maps of landforms. Izv. AN SSSR. Ser. geog. no. 4:104-110 Jl-Ag '61. (MIRA 14:7)

1. Institut geografii AN SSSR.
(Atmospheric temperature) (Landforms) (Humidity)

MUKHINA, L.I.; FADEYEVA, N.V.

The Fifth All-Union Conference on the Study of Landforms.
Izv. AN SSSR. Ser. geog. no.6:157-162 N-D '61. (MIRA 14:12)
(Landforms- Congresses)

PREOBRAZHENSKIY, V.S., kand.geogr.nauk; ZHUKOV, V.M., kand.geogr. nauk; MUKHINA, L.I., kand.geogr.nauk; NEDESHEV, A.A., kand. geogr.nauk; ALEKSANDROVA, T.D.; GOVSH, R.K., inzh.; LEYTES, A.M., nauchnyy sotr.; CHEKMENEV, V.Ye., red. izd-va; TIKHOMIROVA, S.G., tekhn. red.

[Natural conditions of the reclamation of the northern part of Chita Province] Prirodnye usloviia osvoeniia Severa Chitinskoi oblasti. Moskva, Izd-vo Akad. nauk SSSR, 1962. 125 p. (MIRA 15:7)

1. Akademiya nauk SSSR. Institut geografii. 2. Institut geografii Akademii nauk SSSR (for Zhukov, Mukhina). 3. Zabaykal'skiy kompleksnyy nauchno-issledovatel'skiy institut Sibirskogo otdeleniya (for Nedeshev, Aleksandrova). 4. Zabaykal'skoye upravleniye Gidrometeorologicheskoy sluzhby (for Govsh). 5. Institut geologii Akademii nauk SSSR (for Leytes).

(Chita Province--Physical geography)

MUKHINA, L.I.

Conference on the regionalization of the Caucasus. Izv. AN SSSR. Ser. geog. no.2:143-144 Mr-Ap '62. (MIRA 15:3)
(Caucasus--Geography--Congresses)

MUKHINA, Lidiya Ivanovna; BUYANTUYEVA, B.R., red.; BAZAROVA, D.B., red.; ZILOTIN, Yu.V., red.

[The Vitim Plateau; natural conditions and regionalization] Vitamskoe ploskogor'e; prirodnye usloviia i raionirovanie. Ulan-Ude, Buriatskoe knizhnoe izd-vo, 1965. 134 p. (MIRA 18:5)

SOV/44 - 58 - 4 - 2657

Translation from: Referativnyy zhurnal, Matematika, 1958, Nr 4, p 9 (USSR)

AUTHOR: Mukhina, L.M.

TITLE: Examples of Exercises of an Industrial Nature on the Subject of "Functional Dependence" (Primery uprazhneniy proizvodstvennogo kharaktera po teme "funktsional'naya zavisimost'")

PERIODICAL: Uch. zap. Vyborsk. gos. ped. in-t, 1957, Nr 2, pp 96-107

ABSTRACT: Bibliographic entry.

Card 1/1

MUKHINA, L.M. (Pskov)

Stimulating the students in geometry lessons. Mat.v shkole no.6:25-26 N-D '62. (MIRA 16:1)
(Geometry--Study and teaching)

MUKHINA, L.M.

Graphic illustration of the equivalence of equations (inequalities) for a secondary school algebra course. Uch. zap. Pskov.gos.ped.inst. no.21:25-32 '64.

Characteristics of students' accomplishments in mathematics. Ibid.:33-46 (MIRA 18:10)

MUKHINA, L.M.; YUSHKEVICH, A.I.

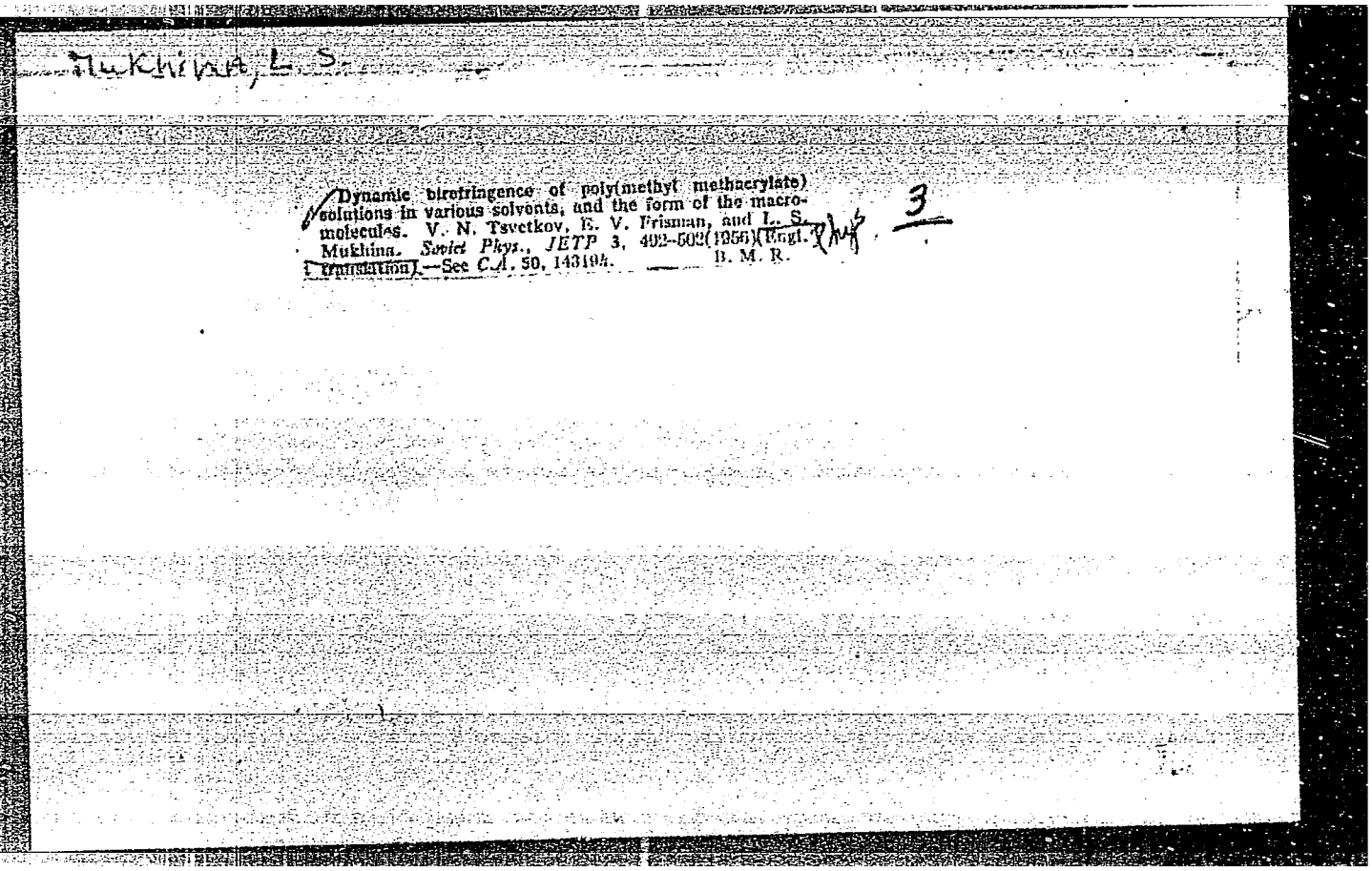
Experience in teaching mathematics in special [illegible] instruction groups. Nauch. zap. Pskov. gos. ped. inst. No. 2 [illegible] 1961.

(MIRA 18:1)

MUKHINA, L.N.

Case of actinomycotic paraproctitis and malignant degeneration of the fistulae after a blind gunshot wound in the lumbosacral region of the spine. Khirurgiia 39 no.9:130-132 S'63 (MIRA 17:3)

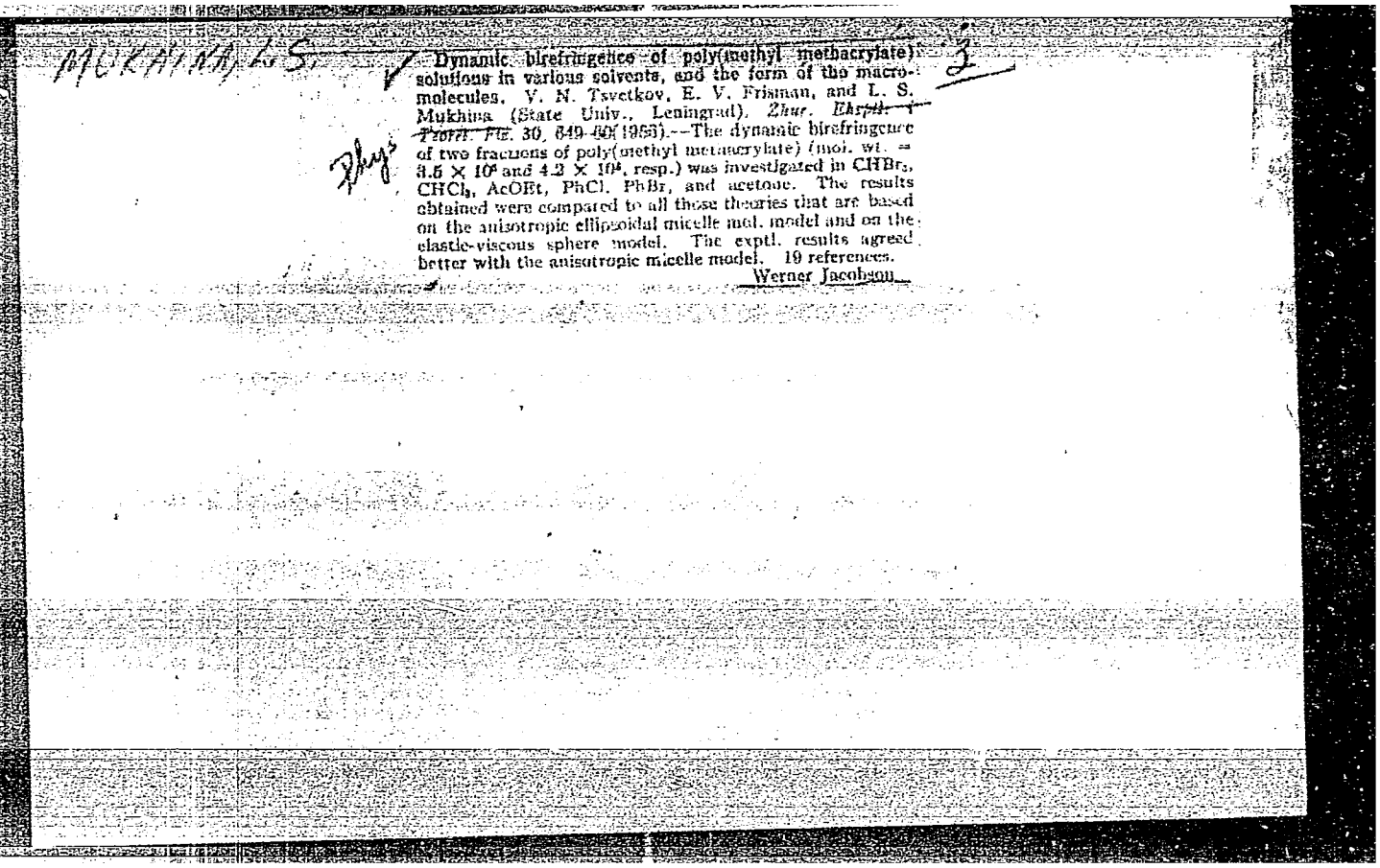
1. Iz Moskovskogo ortopedicheskogo gospitalya (nachal'nik doktor med. nauk S.N. Voskresenskiy; nauchnyy rukovoditel' - chlen-korrespondent AMN SSSR prof. V.D. Chaklin; nachal'nik otdeleniya - kand. med. nauk I.Yu. Fefer).



Mukhina, L. S.

Dynamic birefringence of poly(methyl methacrylate) solutions in various solvents, and the form of the macromolecules. V. N. Tsvetkov, E. V. Frisman, and L. S. Mukhina. *Soviet Phys., JETP* 3, 492-502(1956)(Engl. Translation).—See *C.A.* 50, 14319h. B. M. R.

3



MUKHINA, L. S.

Dynamic birefringence of poly(methyl methacrylate) solutions in various solvents, and the form of the macromolecules. V. N. Tsvetkov, E. V. Frisman, and L. S. Mukhina (State Univ., Leningrad). *Zhur. Eksptl. i Teoret. Fiz.* 30, 649-60 (1956).--The dynamic birefringence of two fractions of poly(methyl methacrylate) (mol. wt. = 3.5×10^5 and 4.2×10^4, resp.) was investigated in $CHBr_3$, $CHCl_3$, AcOEt, PhCl, PhBr, and acetone. The results obtained were compared to all those theories that are based on the anisotropic ellipsoidal micelle mol. model and on the elastic-viscous sphere model. The exptl. results agreed better with the anisotropic micelle model. 19 references.

Werner Jacobson

GRUBER, V.N.; MUKHINA, L.S.

Mechanism of catalytic polymerization of cyclic dimethylpolysiloxanes. Vysokom.soed. 1 no.8:1194-1199 Ag '59.
(MIRA 13:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka.
(Polymerization) (Siloxanes)

S/190/61/003/001/012/020
B119/B216

AUTHORS: Gruber, V. N., Mukhina, L. S.

TITLE: Mechanism of catalytic polymerization of cyclic dimethyl polysiloxanes. II.

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 1, 1961, 84-87

TEXT: In their previous publication (Ref. 1) the authors were able to show that the catalytic polymerization of cyclic dimethyl polysiloxanes (up to a resinous consistency) is based on redox reactions in the catalyst system (catalyst: concentrated H_2SO_4, $FeCl_3$). The present work studies the effect of small quantities of salts and metals with variable valency ($CuSO_4$, $MnSO_4$, $FeSO_4$, $Fe_2(SO_4)_3$, $KMnO_4$) as well as glycerol and ethyl alcohol on the rate of polymerization in presence of concentrated H_2SO_4 and $Al_2(SO_4)_3 \cdot 2H_2O$ as catalysts. 0.01 g of each of the above-mentioned salts was added to 150 g portions of the initial silicone oil. The reaction mixtures contained 2% catalyst (relative to silicone oil). The experiments showed that the

Card 1/2

reaction rate is increased 2 - 3 fold by the presence of these compounds. This enables polymerization on $Al_2(SO_4)_3 \cdot 2H_2O$ plus a slight amount of concentrated H_2SO_4 at room temperature instead of the usually required temperature of 90 - 100°C. Glycerol and ethyl alcohol reduce the reaction rate. Polymerization tests in narrow glass vessels (2.5 cm in diameter and 20 cm high) in presence of $FeCl_3$, $Al_2(SO_4)_3 \cdot 2H_2O$ concentrated H_2SO_4 yielded no rubbery products, since polymerization was suppressed by the walls of the vessel. These findings indicate that the redox process (interaction between the lower-oxide, oxide and peroxide forms of the catalyst) underlying the polymerization of cyclic dimethyl polysiloxanes is a chain reaction. The authors thank V. N. Kartsev, M. M. Fomicheva, L. I. Shebalina and M. I. Vinnikovskaya for assisting in the experiments. Mention is made, among others, of a publication by N. N. Semenov. There are 2 tables and 6 references: 10 Soviet-bloc and 1 non-Soviet-bloc.

SUBMITTED: June 7, 1960

Card 2/2

GRUBER, V.N.; NEL'SON, K.V.; KOZLOVA, N.V.; MIKHAYLOVA, T.A.; MUKHINA, L.S.

Mechanism of the catalytic polymerization of cyclic dimethylpolysiloxanes. Vysokom. soed. 3 no.1:89-92 Ja '61. (MIRA 14:2)
(Siloxanes) (Polymerization)

S/190/61/003/002/002/012
B130/B202

AUTHORS: Gruber, V. N., Mukhina, L. S.

TITLE: Mechanism of catalytic polymerization of cyclic dimethyl polysiloxanes. IV

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 2, 1961, 174-176

TEXT: Polymerization of cyclic dimethyl polysiloxanes (silicone oil) in the presence of the known redox system $2KMnO_4 + 3H_2SO_4 = 2MnSO_4 + K_2SO_4 + 3H_2O + 5O_2$ as catalyst, confirms the assumption that this polymerization is the result of the redox reaction. Silicone oil was filled into a flask provided with a stirrer. Subsequently, $KMnO_4$ and H_2SO_4 were added: 3.22 g $KMnO_4$ and 3 g H_2SO_4 per 150 g silicone oil. The weakly pink color indicated the presence of Mn^{++}, while the finely disperse brown mass is indicative of the formation of MnO_2. The rubber-like specimens were obtained after 1-2 hr at room temperature; no further time was necessary for ripening (Table). If $Al_2(SO_3)_3$ is applied as catalyst, 70 hr are necessary for the ripening. The specimens of the siloxane rubbers

obtained have the properties of elastomers. The authors thank V. N. Kartsev, M. M. Fomicheva, and L. I. Shebalina for their assistance. There are 1 table and 5 Soviet-bloc references.

SUBMITTED: June 7, 1960

Legend to Table: 1) molecular weight; 2) content of volatile substances; 3) breaking strength, kg/cm^2; 4) relative elongation; 5) residual elongation; 6) coefficient of frost resistance at -55°C; 7) after thermal aging (72 hr at 200°C); a) relative elongation; b) residual elongation; c) breaking strength; 8) duration of polymerization, hr. The standard values are given in parentheses.

S/190/61/003/002/002/012
B130/B202

Mechanism of catalytic ...

Мол. вес. (400—700 000) ①	Содержание золы, % (≤ 1) ②	Сопротивление разрыву, кГ/см² (≥ 30) ③	Относительное удлинение, %, (≥ 225) ④	Остаточное удлинение, %, (≤ 4) ⑤	Коэффициент морозостойкости при —55° (≥ 0,5) ⑥	⑦ После теплового старения (72 часа при 200°)			Продолжительность вулканизации, часы ⑨
						относительное удлинение, % (≥ 100) ⑧	остаточное удлинение, % ⑩	сопротивление разрыву, кГ/см (≥ 30) ⑪	
723 000	4,20	42	270	2	0,76 и 0,11 при —60°	210	0	42	1,25
699 000	2,50	48	280	2	0,79 и 0,32 при —60°	233	2	44	1,5
318 000	2,80	43	245	2	0,79 и 0,22 при —60°	223	2	45	2,0
689 000	4,86	45	285	2	0,76	230	2	46	2,0
803 000	4,48	43	250	2	0,77	210	2	41	2,0
742 000	5,20	41	230	2	0,74	210	0	47	1,17
567 000	4,42	43	215	2	0,75	200	2	45	1,17
669 000	4,60	41	215	2	0,80	200	2	48	1,17

Card 3/3

GRUBER, V.N.; PANCHENKO, B.I.; MUKHINA, L.S.; MIKHAYLOVA, T.A.

Synthesis of a dimethylsiloxane elastomer by the hydrolytic condensation method. Vysokom.soed. 4 no.7:1042-1048 Jl '62. (MIRA 15:7)

1. Nauchno-issledovatel'skiy institut sinteticheskogo kauchuka imeni S.V. Lebedeva.
(Silicon organic compounds)
(Rubber, Synthetic)

KISEL'NIKOV, V.N.; DEMSHIN, V.Ya.; SHIROKOV, S.G.; Prinimali uchastiye: MUKHINA, L.V.; PRISHCHEPINA, A.I.; LOGUNOVA, G.V.; LAPSHINA, L.M.; PENYAYEVA, L.A.

Production of granulated carbamide from the melt of the distillation column of the first stage in a fluidized bed. Izv. vys. ucheb. zav.; khim. i khim. tekh. 8 no.3:504-510 '65. (MIRA 18:10)

1. Ivanovskiy khimiko-tekhnologicheskiy institut, kafedra protsessov i apparatov.

KROPACHEVA, A.A.; MUKHINA, L. Ye.; KASHNIKOVA, N.M.; PARSHINA, V.A.

Reactions of esters of certain amino acids an piperidine with the phosphonitrile chloride trimer. Zhur. ob. khim. 31 no.3:1036-1037 Mr '61. (MIRA 14:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(Phosphonitrile chloride) (Amino acids) (Piperidine)

KROPACHEVA, A.A.; MUKHINA, L.Ye.

Interaction of ethylenimine with a trimer of phosphonitrile trichloride. Zhur.ob.khim. 31 no.7:2437 Jl '61. (MIRA 14:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(Ethylenimine) (Phosphonitrile chloride)

S/079/62/032/002/002/011
D227/D303

AUTHORS: Kropacheva, A.A. and Mukhina, L.Ye.

TITLE: Reactions of phosphonitrie chloride trimer. 1. Substitution of chlorine atoms of the trimer with morpholine

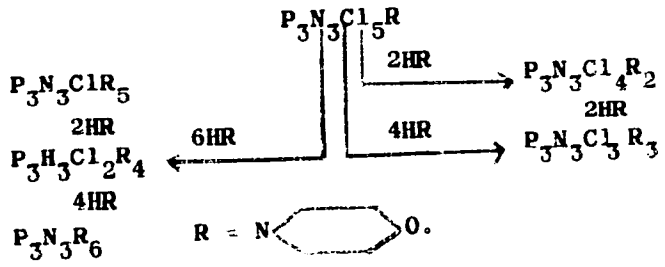
PERIODICAL: Zhurnal obshchey khimii, v. 32, no. 2, 1962, 521-525

TEXT: The authors conducted a study of the reaction of phosphonitrile chloride trimer with morpholine. A step-bystep substitution of 1 to 6 chlorine atoms was carried out to find out the order of substitution, the number of Cl atoms which can be substituted and the possibility of isomerism. The reactions were conducted in ether or benzene at different temperatures and with varying quantities of reactants using morpholine as an HCl acceptor. The reaction products after filtration of morpholine hydrochloride and removal of solvent were examined by chromotography. It was shown that by changing the ratio of reactants and temperature it was possible to control the reaction and, therefore, the degree of substitution. Phosphonitrile chloride trimers with substituted 1,2,3,4, 5 and 6

Card 1/3

Reactions of phosphonitrie ...

Cl atoms were obtained. In the preparation of trimorpholyl derivative, products with different m.p.'s but similar compositions were produced. Mono-, di-, tetra- and hexamorpholyl derivatives were obtained in yields of 64, 62, 75, 75% respectively (corresponding m.p.'s being 92.5-93.5, 106-108, 157-158, and 293°C). Trimorpholyl derivative's (m.p.'s 114-115 and 101.5-102.5°C) yield was only 36% and that of penta-morpholyl derivative 13.3 %, indicating intensive side reactions. The authors have also found the possibility of converting triphosphonitrile chloride with lower degree of substitution into derivatives with higher degree of substitution with morpholine according to the following scheme:



Card 2/3

There are 2 tables and 7 references, 1 Soviet-bloc and 6 non-Soviet-bloc. The reference to the English-language publication reads as follows: Andrieth, L.F. Steinman and A.D. Toy, Chem. Revs., 32, 109 (1943).

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut im. S. Ordzhonikidze (All-Union Scientific Research Chemico-Pharmaceutical Institute im. S. Ordzhonikidze).

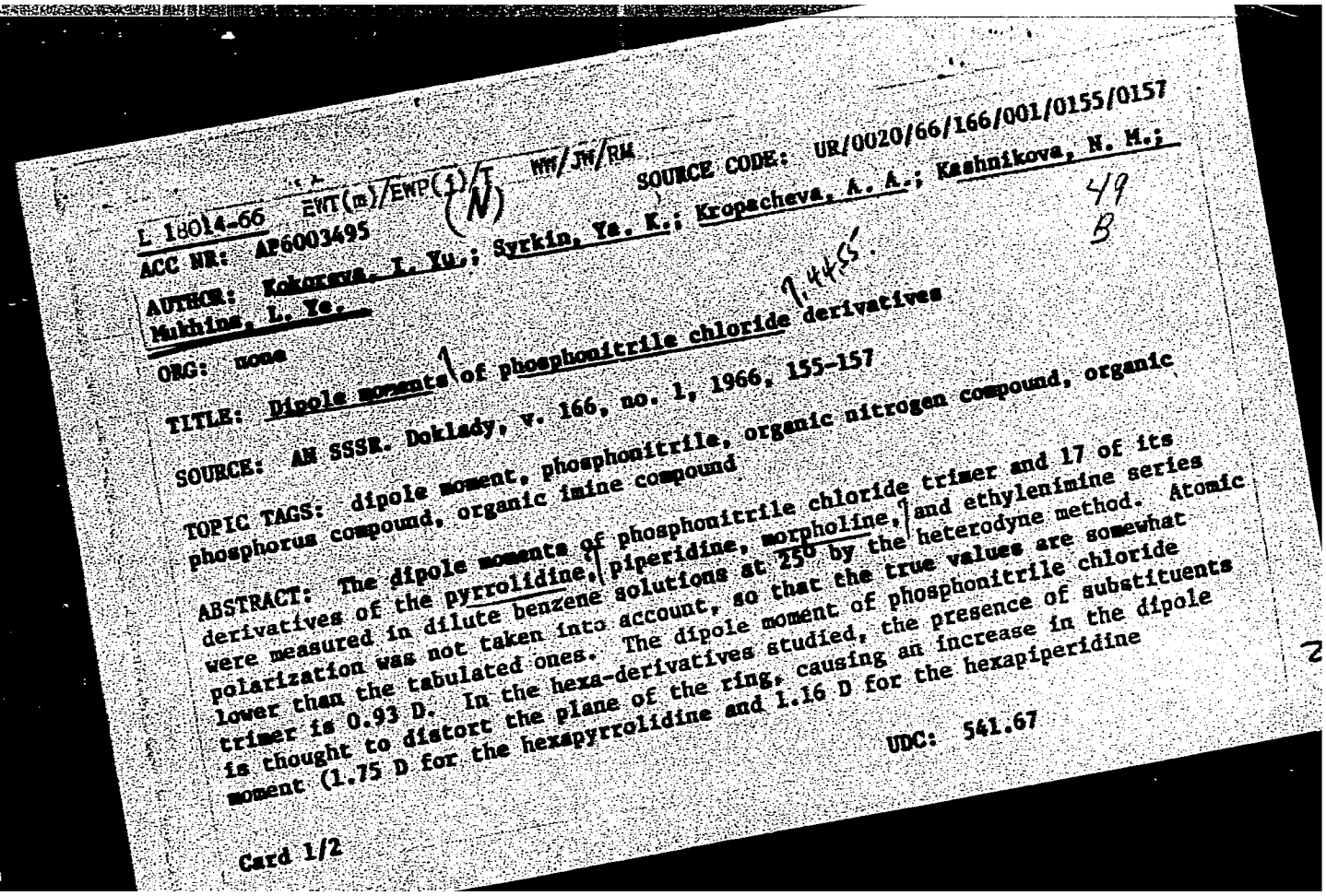
SUBMITTED: January 19, 1961

Card 3/3

KROPACHEV, A.A.; MUKHINA, L.Ye.

Substitution of morpholine for chlirine atoms in a phosphonitrile chloride trimer. Zhur.obshch.khim. 33 no.2:706-707 F '63.
(MIRA 16:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut S. Ordzhonikidze.
(Phosphonitrile chloride) (Morpholine)



L 18014-66 EWT(m)/EWP(1)/T (N) WW/JW/RM SOURCE CODE: UR/0020/66/166/001/0155/0157

ACC NR: AP6003495

AUTHOR: Kokoreva, L. Yu.; Syrkin, Ya. K.; Kropacheva, A. A.; Kashnikova, N. M.; Mukhina, L. Ye.

49
B

ORG: none

TITLE: Dipole moments of phosphonitrile chloride derivatives

1,44&5.

SOURCE: AN SSSR. Doklady, v. 166, no. 1, 1966, 155-157

TOPIC TAGS: dipole moment, phosphonitrile, organic nitrogen compound, organic phosphorus compound, organic imine compound

ABSTRACT: The dipole moments of phosphonitrile chloride trimer and 17 of its derivatives of the pyrrolidine, piperidine, morpholine, and ethylenimine series were measured in dilute benzene solutions at 25° by the heterodyne method. Atomic polarization was not taken into account, so that the true values are somewhat lower than the tabulated ones. The dipole moment of phosphonitrile chloride trimer is 0.93 D. In the hexa-derivatives studied, the presence of substituents is thought to distort the plane of the ring, causing an increase in the dipole moment (1.75 D for the hexapyrrolidine and 1.16 D for the hexapiperidine

UDC: 541.67

Card 1/2

L 18014-66
ACC NR: AP6003495

derivatives). In the case of the mono-derivatives, the dipole moment of the trimer differs markedly from the moments of the monopyrrolidyl (3.74 D), monopiperidyl (3.67 D), monoethylenimyl (3.07 D), and monomorpholyl (1.91 D) derivatives. This substantial difference is attributed to the fact that phosphorus accepts the unshared pair of electrons of the nitrogen of the substituent in its 3d subshell. Orig. art. has: 1 table.

SUB CODE: 07 / SUBM DATE: 08Jul65 / ORIG REF: 001 / OTH REF: 006

Card 2/2 mjs

SOV/133-59-2-15/26

AUTHORS: Kossovskiy, L.D., Khorosh, V.A. and Mukhina, M.A.

TITLE: On the Nature of Fissures on Steel 1Kh18N9T (Priroda rvanin na stali 1Kh18N9T)

PERIODICAL: Stal', 1959, Nr 2, pp 147-148 (USSR)

ABSTRACT: The occurance of defects on blooms of steel 1Kh18N9T in the form of transverse fissures, situated as a rule only on one face near to the bottom part has been often observed (fig.1). In view of the position of the defect, it was thought that the defect was caused by non-uniform heating of ingots in the soaking pit. To check on this possibility, ingots from 16 heats were heated according to three alternative heating practices: a) by the usual practice, i.e. turning the ingot 180° 1.5 hours before the removal from the soaking pit; b) by heating the ingots without turning and c) heating the ingots in reversed position (head part down). The subsequent examination of blooms did not show any relationship between the heating practice and the position of the defect. Observations during rolling indicated that the defect appears on the face most cooled with water used for cooling rolls. This was confirmed by rolling a part of

Card 1/3

On the Nature of Fissures on Steel 1Kh18N9T

the ingots from the same heat with and without water cooling of rolls. The defect appeared on all blooms rolled with water cooling. The following mechanism of the formation of the defect is postulated: a) water from rolls falling on to the rolled surface cools only the surface layer, reheating of which by the heat from the lower situated layers is slow due to the low conductivity of 1Kh18N9T steel; b) the cooled layer becomes more rigid than the rest of the metal and is more difficult to deform along the height and this obtains a smaller elongation, as a result tensile stresses appear on this layer; c) a decrease in plasticity of the cooled layer is particularly characteristic for 1Kh18N9T steel, the plasticity range of which lies within 1150-1250°C; d) under the influence of tensile stresses the less plastic and weakened by skin holes (on the surface of an ingot) layer breaks forming a row of transverse fissures. In order to prevent the formation of the defect, rolling of steel 1Kh18N9T on

 the blooming mill should be carried out without or with

On the Nature of Fissures on Steel 1Kh18N9T SOV/133-59-2-15/26

only a small supply of water for cooling rolls. An increase in the number of turnings helps to decrease the number and the size of fissures on the surface of the bloom. There are 2 figures.

ASSOCIATION: Chelyabinskiy Metallurgicheskiy Zavod (Chelyabinsk Metallurgical Works)

Card 3/3

KHOROSH, V.A.; BOYKO, M.Ye.; KOSSOVSKIY, L.D.; SHVYREV, M.S.; KOPYTIN, P.I.; BUSANOV, I.I.; Prinimali uchastiye: KOVTUNOVICH, V.A.; KUKSHKINA, M.Ye.; KYAZANOVA, A.P.; VISKUNOVA, T.Ye.; MUKHINA, M.A.

Determining the optimal conditions for blooming mill operations. Stal' 23 no.4:338-340 Ap '63. (MIRA 16:4)

1. Chelyabinskiy metallurgicheskiy zavod.
(Rolling mills)

MAKSIMOV, N. A., TURETSKAYA, R. Kh., and MUKHINA, M. F.

Mbr., Inst. Plant Physiology im. K. A. Timiryazev, Acad. Sci., - 1946-

"Tests of the Physiological Activity of Certain New Growth Substances,"

Dok. AN, 55, No. 7, 1947

37800

S/120/62/000/002/025/047
E039/E435

14.7900

AUTHORS: Kolbasov, V.A., Mukhina, M.M., Nazarov, V.P.

TITLE: A spectrometer for electron paramagnetic resonance absorption with a high frequency modulated magnetic field

PERIODICAL: Pribory i tekhnika eksperimenta, no.2, 1962, 107-110

TEXT: This spectrometer can record electron paramagnetic resonance (E.P.R.) absorption in a sample containing paramagnetic centres at room temperature and at 77°K for wavelengths ~ 3 cm. The E.P.R. absorption signal is displayed on a long afterglow cathode ray tube or recorded on tape. A block diagram of the apparatus is given and also a circuit diagram of the recording apparatus. An adjustable rectangular resonator containing the sample is situated between the poles of an electromagnet, the field of which is modulated at a frequency of 465 Kc/s. The constant component of the magnetic field can be varied in the range 50 to 5000 oersteds and is stabilized to 0.01%. The recording apparatus consists essentially of a preamplifier which simultaneously amplifies the E.P.R. signal and the klystron

Card 1/2

A spectrometer for electron ...

frequency (465 Kc/s and 295 Kc/s respectively); an indicator circuit for the amplification and recording of the E.P.R. signal and a high frequency generator. These circuits are described in detail. By simultaneously amplifying the E.P.R. signal and klystron frequency the number of tubes and other components is decreased, thereby increasing the reliability of the apparatus. In addition, the separation of the pre-amplifier and indicating circuits simplifies the problem of screening. The apparatus has been used for recording E.P.R. spectra of different classes of organic compounds. Its sensitivity is about 10^{-11} mole for the free radical of diphenylpicrylhydrazyl. There are 5 figures.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR
(Institute of Elemental-Organic Compounds, AS USSR)

SUBMITTED: July 6, 1961

Card 2/2

KOLBASOV, V.A.; MUKHINA, M.M.

Simple paramagnetic resonance spectrometer with high-frequency modulation of the electric field. Prib. i tekh. eksp. 8 no.1: 84-86 Ja-F '63. (MIRA 16:5)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Paramagnetic resonance and relaxation)
(Spectrometer)

L 44130-65 EEC-4/EEC(b)-2/EWG(r)/EEC(k)-2/EWG(v)/EWA(h)/EWA(k)/EWP(k)/EWT(1)/EWT(m)/EEC(t)/FBD/EWP(1)/T/EWA(m)-2/EWP(e) Pe-5/Pf-4/Pi-4/Pl-4/Pm-4/Pn-4/Po-4/Pae-2/Peb IJP(c) WH/WG/GW/NS-4

ACCESSION NR: AP5010826 UR/0020/65/161/004/0810/0812

AUTHOR: [illegible]

TITLE: Use of a traveling-wave maser for radio astronomical investigations at the 8-cm wavelength

SOURCE: AN SSSR. Doklady, v. 161, no. 4, 1965, 810-812

TOPIC TAGS: [illegible] maser, traveling wave maser, radio source [illegible] A, radio [illegible]

ABSTRACT: The [illegible] utilized during radio astronomical observations at the 8-cm wavelength in October 1963 employed a traveling-wave ruby maser with a Cr^{3+} concentration of about 0.036%. Ruby crystals were located on either side of the rod delay system. Plates of an iron-yttrium polycrystalline garnet were used to absorb reflected waves; the plates were located under the ruby rods along the delay system. The delay system was mounted in the metal cryostat which ensured continuous maser operation for 8 hr without replenishing the liquid helium. The maser operated at 4.2K

Card 1/[illegible]

L 44130-65
ACCESSION NR: AP5010828

and had a gain of 20 db at a passband of 20 Mc. Maser noise temperature was less than 15K. The gain could be increased to 35 db by pumping out the helium vapor and lowering the boiling point of helium to 2K. The maser could be tuned within ±50 Mc. The use of the maser reduced radiometer noise below 1% db. The use of the circulator in front of the mixer to exclude heterodyne signals from the input and fine tuning of the modulator, antenna, and matched load reduced spurious modulation below 0.5K. Additional decoupling was not required because of the gate properties and wide band of the maser. In the entire radiometer passband, the standing wave ratio of the load was less than 1.06, and radiometer sensitivity was increased about tenfold. At a time constant of 2 sec, a radiometer without the maser recorded a radio emission flux of 540 x 10^{-26} w/m^2 cps from Cygnus-A; with the UH maser, recorded emission from radio source 3C273 was 30 x 10 w/m^2 cps. Recorded emission from Jupiter was 13.1 x 10^{-26} w/m^2 cps, corresponding to an equivalent brightness temperature of the disk of 680 ±27K. The high sensitivity of the maser was used to advantage in determining the effective dimension of Taurus-A, which was equal to 3.27 ±0.05'. Orig. art. has: 3 figures and 1 table. [DW]

Card 2/4

MUKHINA, M.P. (Leningrad, 21, Institutskaya ul., d. 6)

Role of hematological studies in the diagnosis and therapy of osteoarticular tuberculosis. Vest. khir. 74 no.6:49-54 S '54. (MLRA 7:10)

1. Iz Gosudarstvennogo instituta khirurgicheskogo tuberkuleza i kostno-sustavnykh zabolevaniy (dir. prof. P.G.Kornev)

(TUBERCULOSIS, OSTEOARTICULAR, blood in,)
(BLOOD, in various diseases,
tuberc., osteoarticular)

MUKHINA, M. P., Cand of Med Sci -- (diss) "Hematological changes during bone-vascular tuberculosis." Leningrad, 1957, 14 pp (Leningrad State Institute for the Advanced Training of Physicians im S. M. Kirov), (KL, 34-57, 90)

BLOKHIN, N.N., prof.; ZVANTSEVA, V.A., kand. med. nauk; MUKHINA, M.P., kand. med. nauk; SYROMYATNIKOVA, N.V., kand. med. nauk

Some physicochemical, biochemical and cytological changes in the synovial fluid of tuberculous synovitis patients. Probl. tub. 42 no.1:64-68 '64. (MIRA 17:8)

1. Leningradskiy institut khirurgicheskogo tuberkuleza (dir. - prof. D.K. Khokhlov, nauchnyy rukovoditel' - deystvitel'nyy chlen AMN SSSR prof. P.G. Kornev).

MUKHINA, N. A., GORGUNKEL', D. M., LEYBOVA, I. M., BALGODETELEVA, V. A. PISKAREVA, IE. V., AVTONOMOVA, L. V., KONONENKO, A. P., DERKACH, V. S. SAVCHENKO, A. M., SOGOMONOV, S. A.

"The study of antitumor substances formed by microorganisms."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1959.

SOLNTSEV, A.I., kand.biologicheskikh nauk, dotsent; MUKHINA, N.A.

Present-day views on the biochemistry of milk carbohydrates. Izv. TSKhA no.6:198-203 '60. (MIRA 13:12)
(MILK--COMPOSITION) (CARBOHYDRATES)

SOLNTSEV, A.I., kand.biologicheskikh nauk, dotsent; MUKHINA, N.A.; P'YASHCHAK, M.Yu., aspirant

Role of lactose in animal feeding. Izv. TSKHA no.3:228-232 '62. (MIRA 15:9)

(Feeding) (Lactose)

MUKHINA, N. A.

MUKHINA, N. A. -- "A Study of Birdsfoot Trefoil of Various Geographical Origins under the Conditions of Leningrad Oblast and Methods of Utilizing It." All-Union Order of Lenin Academy of Agricultural Sciences imeni V. I. Lenin. All-Union Inst of Plant Growing. Leningrad, 1956.
(Dissertation for the Degree of Candidate in Biological Sciences).

SO: Knizhnaya Letopis', No 9, 1956

SMIRNOVA-IKONNIKOVA, M.I., kandidat biologicheskikh nauk.; MUKHINA, M.A.

Feed value of bird's-foot trefoil. Dokl. Akad. sel'khoz. 21 no.9: 24-28 '56. (MLRA 9:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut rastenievodstva. Predstavleno akademikom P.M. Zhukovskim.
(Bird's-foot trefoil)

MUKHINA, N. S., KORYAKIN, I. S., GOVOROVA, N. S.

"Sanitary-hygienic characteristics of the water supply of certain areas of cultivation of virgin and fallow lands of Kazakhstan."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1959.

MUKHINA, N.S.

Iodine content of products of vegetable origin in some districts of Alma-Ata Province in relation to the problem of endemic goiter. Zdrav. Kazakh. 21 no.1:73-75 '61. (MIRA 14:3)

1. Iz kafedry obshchey gigiyeny (zav. - professor I.S.Koryakin) Kazakhskogo meditsinskogo instituta.
(ALMA ATA PROVINCE--MINERALS IN FOOD) (IODINE)
(GOITER)

KORYAKIN, I.S.; ALEKSEYEVA, V.G.; GOVOROVA, M.S.; VORONINA, T.V.; DAULBAYEV, F.A.; DEMIDOVA, S.I.; KAZANTSEVA, G.V.; MOROZ, V.M.; MUKHINA, N.S.; PIPIN'YAN, P.O.; SHTIFANOVA, A.K.

Trace elements in drinking water sources of Kazakhstan and their relations to the problem of some noninfectious diseases. Vest. AMN SSSR 19 no.7:90-95 '64. (MIRA 18:3)

1. Alma-Atinskiy meditsinskiy institut.

KUTATELADZE, S.S.; LEONT'YEV, A.I.; RUBTSOV, N.A.; GOL'DSHTIK, M.A.; VOLCHKOV, E.P.; DAVYDOVA, M.V.; DRUZHININ, S.A.; KIRILLOVA, N.N.; MALENKOV, I.G.; MOSKVICHEVA, V.N.; MIRONOV, B.P.; MUKHIN, V.A.; MUKHINA, N.V.; REBROV, A.K.; FEDOROV, V.K.; KHABAKHPASHEVA, Ye.M.; SHTOKOLOV, L.S.; SHPAKOVSKAYA, L.I., red.

[Heat and mass transfer and friction in a turbulent boundary layer] Teplomassoobmen i trenie v turbulentnom pogranichnom sloe. Novosibirsk, Red.-izd. otdel Sibirskogo otd-niia AN SSSR, 1964. 206 p. (MIRA 18:1)

MUKHINA, O.M.; KAPNIK, G.M.; MASHKIN, M.I.(Moskva)

Study of contact specimens from the mucosa of the rectum and the sigmoid in dysentery. Klin.med.33 no.5:51-57 My '55. (MLRA 8:9)

1. Iz 1-y Klinicheskoy infektsionnoy bol'nitsy (glavnyy vrach M.G. Zalesskver)

(DYSENTERY, manifest.
mucosa of rectum & sigmoid)
(MUCOUS MEMBRANE, in various dis.
mucosa of rectum & sigmoid in dysentery)
(RECTUM, in various dis.
mucosal changes in dysentery)
(COLON, in various dis.
same)

MIKHLIN, S.Ya., KAPNIK, G.M.; MUKHINA, O.N.

Clinical significance of quantitative determination of enterokinase in feces of patients with food poisoning. Terap.arkh. 28 no.3: 32-36 '56. (MLRA 9:8)

1. Is laboratorii pishchevareniya (zav. prof. G.K.Shlygin) Instituta pitaniya AMN SSSR i 1-y klinicheskoy infektsionnoy bol'nitsy (nauchnyy rukovoditel' G.M.Kapnik), Moskva

(SALMONELLA INFECTIONS, diag.
enterokinase determ. in feces)
(PROTEASES
mold kinase determ. in feces in diag. of salmonella infect.)
(FECES,
mold kinase determ in salmonella infect.)

TSEYDLER, S.A., kandidat meditsinskikh nauk; MUKHINA, O.N.

Diagnosis of sporadic cases of Q fever. Terap.arkh. 28 no.7:83-91 '56. (MIRA 10:1)

1. Iz Moskovskoy klinicheskoy infektsionnoy bol'nitsy No.1.
(Q FEVER, diag.
of sporadic cases)

MUKHINA, O.N.

KAPNIK, G.M.; MIKHLIN, S.Ya.; MUKHINA, O.N.

Detecting functional intestinal disorders by studying enzymatic factors in gastrointestinal diseases of alimentary origin. Sov. med. 21 no.9:68-70 S '57. (MIRA 11:1)

1. Iz laboratorii pishchevareniya (zav. - prof. G.K.Shlygin) Instituta pitaniya Akademii meditsinskikh nauk SSSR i 1-y klinicheskoy infektsionnoy bol'nitsy (nauchnyy rukovoditel' G.M.Kapnik)

(GASTROINTESTINAL DISEASES, diag.
determ. of enterokinase in feces)
(PROTEASES, determ.
enterokinase in feces in diag. of gastrointestinal dis.)
(FECES
enterokinase determ. in diag. of gastrointestinal dis.)

SEMENDYAYEVA, M.Ye.; MUKHINA, O.N.

Hormone therapy in Botkin's disease. Sov.med. no.1:21-31 Ja '62.
(MIRA 15 4)

1. Iz laboratorii deystvitel'nogo chlena AMN SSSR prof. Ye.M.Tareyeva i klinicheskoy infektsionnoy bol'nitsy No.1 (glavnyy vrach N.M.Zaleskver).
(HEPATITIS, INFECTIOUS). (HORMONE THERAPY)

SEMENDYAYEVA, M.Ye.; MUKHINA, O.N.; BOGDANOVA, N.V.

Recurrence of Botkin's disease after hormonal therapy. Vop.med. virus. no.9:248-254 '64. (MIRA 18:4)

MUKHINA, O.P., kand.biol.nauk, dots.

Causes of repeated ulcerations of tissues around scars.
Khirurgiia 35 no.4:111-115 Ap '59. (MIRA 12:8)

1. Iz kafedry normal'noy anatomii i gistologii Sverdlovskogo sel'skokhozyaystvennogo instituta (dir. - dots. N.S.Turayev).
(CICATRICES
ulceration, repeated, of tissues around scars, causes (Rus))
(ULCER
repeated ulceration of tissues around scars, causes (Rus))

MUKHINA, O.P. (Sverdlovsk, Vtuzgorodok, ul. Malysheva, 142, kv.139)

Observations on the fixation of striated muscle fibres to chitin. Arkh.anat.gist.i embr. 37 no.10:88-90 O '59. (MIRA 13:4)

1. Kafedra normal'noy anatomii i gistologii (zaveduyushchiy - dotsent, kand. biologicheskikh nauk O.P. Mukhina) Sverdlovskogo sel'skokhozyaystvennogo instituta.
(MUSCLES anat. & histol.)
(POLYSACCHARIDES)

ACC NR: AT6032983 SOURCE CODE: UR/2546/66/000/149/0003/0038

AUTHOR: Ponomarenko, S. I.; Koshel'kova, G. A.; Mukhina, P. A.

ORG: none

TITLE: Results of examining different methods of forecasting thunderstorms

SOURCE: Moscow. Tsentral'nyy institut prognozov. Trudy, no. 149, 1966. Rezul'taty ispytaniy razlichnyikh sposobov kratkosrochnyikh prognozov pogody (Results of analyses of various short-range weather forecasting methods), 3-38

TOPIC TAGS: storm, synoptic meteorology, weather forecasting

ABSTRACT: The article summarizes and evaluates methods of forecasting thunderstorms proposed by Lebedeva, Slavin, Bailey, Whiting, Cox and Faust. Evaluation of their reliability and accuracy shows that all six methods are practical, but it is difficult to determine which method is better since they give different results under different conditions. If the forecast objective is to obtain accurate warnings of storm presences, the Whiting method is most successful since the proportion of storm occurrences when none were forecast is least. However, the overall correctness of the Whiting method is low. When the objective is reliable forecasting of the presence or absence of storms the Lebedeva and Faust methods are better. The occurrence of storms within a 100-150 km radius is forecast by all methods fairly successfully—81-83%.

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ACC NR: AT6032983

For a limited area (within 50 km of the station) the overall accuracy of the Faust and Lebedeva methods is highest--82-78%. As the distance is increased to 100-200 km the overall correctness of these methods drops sharply while that of the Slavin, Bailey and Whiting methods increases. Thunderstorms can be forecast more successfully in cyclones and on fronts, especially on cold fronts, than in anticyclones and backs and in warm sectors of cyclones. "Junior Research Associate N. E. Minakova took part in the work in addition to the authors of this article." Orig. art. has: 15 tables, 4 figures and 5 equations.

SUB CODE: 04/ SUBM DATE: none/ ORIG REF: 007/ OTH REF: 004

Card 2/2

ACC NR: AR6035074 SOURCE CODE: UR/0169/66/000/008/B061/B062

AUTHOR: Ponomarenko, S. I.; Koshel'kova, G. A.; Mukhina, P. A.

TITLE: Results of tests of various means of forecasting thunderstorms

SOURCE: Ref. zh. Geofizika, Abs. 8B431

REF SOURCE: Tr. Tsentr. in-ta prognozov, vyp. 149, 1966, 3-38

TOPIC TAGS: storm, cyclone, weather forecasting, weather station, meteorology

ABSTRACT: The testing methods of forecasting thunderstorms by the Lebedeva, Slavin, Beyli, Whiting, Koks, and Faust techniques was made from June to August 1963 in the Central Forecasting Institute according to data from 18 stations in the European USSR. From 75 to 92 forecasts were developed for each station, and a total of 1334 to 1656 forecasts were developed by various methods. The basic elements of each method are presented. Tests have shown that according to criteria N (reliability) and Q (accuracy), all six methods are effective in practice. But according to these criteria it is difficult to decide which of the methods is

UDC: 551.509.326

Card 1/3

better, because in different cases they give different results. In the presence of a thunderstorm, the more successful method was found to be that of Whiting, and as a secondary choice—those of Lebedeva and Faust. But according to the Whiting method, thunderstorms are frequently forecast but are not observed, and the evaluation was found to be the lowest (23 percent), but forecasts made according to the methods of Lebedeva and Faust, had an evaluation of 32 and 40 percent, respectively. The total justification of thunderstorms and lack of it is also very low according to the method of Whiting (53 percent); it is of 80 to 82 percent according to the methods of Lebedeva and Faust. All methods, particularly those of Faust, Lebedeva, and Koks, forecast relatively successfully (81—83 percent) the presence of a thunderstorm in a radius of 100—150 km. In a small region (of the station), thunderstorm forecasting is an extremely difficult problem. Only three methods (those of Lebedeva, Faust, and Koks) were found to be better than inertial forecasts. The absence of a thunderstorm is forecast with relative reliability by all methods. A higher general justification in a small region (of the station, and within a 50-km radius), were forecasts calculated by the methods of Faust (82 percent), Lebedeva (80 percent), and Koks (78 percent). With an increase in the distance (in a 100—200-km radius), the general justification of forecasts by these methods decreases sharply, but increases for the methods of Slavin, Beyli, and Whiting. The general justification of the forecasts for a

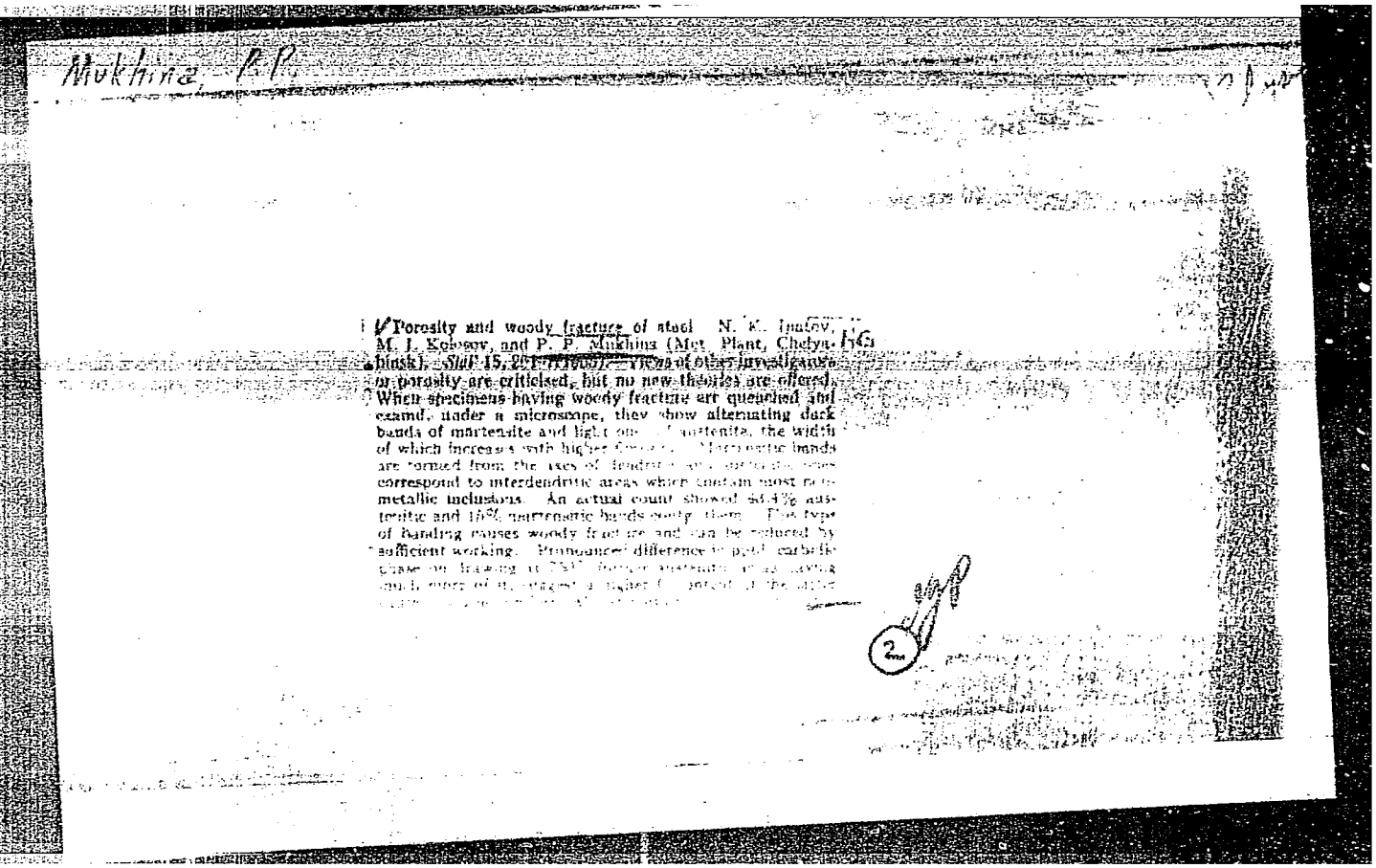
ACC NR: AR6035074

100—200-km radius by the methods of Slavin, Beyli, and Whiting still remains less successful than according to the methods of Lebedeva, Faust, and Koks in a radius of up to 50-km. Thunderstorms in cyclones and on fronts, especially on cold fronts, are forecast more successfully than in anticyclones, in the rear, and in the warm sector of the cyclone. Z. Makhover. [Translation of abstract]

[GC]

SUB CODE: 04/

Card 3/3



Mukhina, P. P.

Porosity and woody fracture of steel. N. K. Ignatov, M. I. Kobeev, and P. P. Mukhina (Met. Plant, Chelyabinsk). *Stal'* 15, 261–7(1955).—Views of other investigators on porosity are criticized, but no new theories are offered. When specimens having woody fracture are quenched and examd. under a microscope, they show alternating dark bands of martensite and light ones of austenite, the width of which increases with higher [illegible]. Martensitic bands are formed from the axes of dendrites, and austenitic ones correspond to interdendritic areas which contain most of the metallic inclusions. An actual count showed 84.4% austenitic and 15.6% martensitic bands in the steel. This type of banding causes woody fracture and can be reduced by sufficient working. Pronounced difference in yield strength [illegible]

2

VASIL'YEV, V.P.; MUKHINA, P.S.

Making allowance for the salt effect in the reactions of a complex formation. Zhur. neorg. khim. 8 no.8:1895-1899 Ag '63. (MIRA 16:8)

1. Ivanovskiy khimiko-tekhnologicheskiy institut.

VASIL'YEV, V.P.; MUKHINA, P.S.

Equilibria in aqueous solutions of thiocyanate complexes of uranyl. Izv. vys. ucheb. zav.;khim. i khim. tekh. 7 no.5: 711-714 '64 (MIRA 18:1)

1. Kafedra analiticheskoy khimii Ivanovskogo khimiko-tekhnologicheskogo instituta.

VASIL'YEV, V.P.; MUKHINA, P.S.

Equilibria in aqueous solutions of thiocyanate complexes of iron. Zhur. neorg. khim. 9 no.5:1134-1140 My '64.

1. Ivanovskiy khimiko-tekhnologicheskiy institut.

LAPKIN, I. I.; MUKHINA, R. G.

Chemical activity sterically unhindered. Part I: Reaction of halomagnesium aryls with chloro-substituted ethers. Zhur.ob.khim. 31 no.12:4001-4006 D '61. (MIRA 15:2)

1. Permskiy gosudarstvennyy universitet.
(Magnesium organic compounds)
(Ethers)

LAPKIN, I.I.; MUKHINA, R.G.

Sterically unhindered chemical activity, Part 2: Mechanism of acid halide reactions with organomagnesium compounds. Zhur. ob. khim. 34 no.11:3575-3579 N '64 (MIRA 18:1)

1. Permskiy gosudarstvennyy universitet.

AKHMEROV, A.Kh., kand.biol.nauk; BATENKO, A.I., kand.sel'skokhoz.nauk; BRUDASTOVA, M.A., kand.tekhn.nauk; GOLOVINSKAYA, K.A., kand.biolog. nauk; GORDON, L.M., kand.ekon.nauk; DOROKHOV, S.M., rybovod-biolog; YEROKHINA, L.V., rybovod-biolog; IL'IN, V.M., rybovod-biolog; ISAYEV, A.I., rybovod-biolog; KADZEVICH, G.V., rybovod-biolog; KOMAROVA, I.V., kand.biol.nauk; KRYMOVA, R.V., rybovod-biolog; KULAKOVA, A.M., rybovod-biolog; MANOHTOVA, L.N., kand.biol.nauk; MEYSNER, Ye.V., kand.biol.nauk; MIKHEYEV, P.V., kand.biol.nauk; MUKHINA, R.I., kand.biol.nauk; PAKHOMOV, S.P., kand.biol.nauk; SUKHOVERKHOV, F.M., kand.biol.nauk; SOKOLOVA, Z.P., rybovod-biolog; TSIUNCHIK, R.I., rybovod-biolog; RYZHENKO, M.I., red.; KOSOVA, O.N., red.; SOKOLOVA, L.A., tekhn.red.

[Handbook on pond fish culture] Spravochnik po prudovomu rybovodstvu. Red.kollegiia: A.I.Isaev i dr. Moskva, Pishchepromizdat, 1959. 374 p. (MIRA 13:4)

1. Moscow. Vserossiyskiy nauchno-issledovatel'skiy institut prudovogo rybnogo khozyaystva.

(Fish culture)

MUKHINA, T.G.; SKROBUT, S.A.; KHMEL'NITSKAYA, P.A.; SHPAYER, A.L., redaktor; PANOVA, L.Ya., tekhnicheskiy redaktor

[How production costs were cut; Lyubertsy silicate brick factory] Kak snizhalas' sebestoimost' produktsii; Liuberetskii zavod silikatnogo kirpicha. Moskva, Gos. izd-vo lit-ry po stroit. materialam, 1956. 34 p. (MLRA 10:4)

(Lyubertsy--Brickmaking)

MUKHINA, Tat'yana Gerasimovna; GRADISHCHEV, N.Ye., nauchnyy red.; BEREZOVSKAYA, A.L., red.; DORODNOVA, L.A., tekhn. red.

[Production of silicate brick]Proizvodstvo silikatnogo kirpicha. Moskva, Proftekhizdat, 1962. 130 p. (MIRA 16:1)
(Sand-lime brick)

MUKHINA, T.G.

Locking device for closing the lid of autoclaves with a bayonet catch. Stroi. mat. 10 no.9:38 S '64
(MIRA 18:2)

1. Glavnyy inzh. Lyuberetskogo silikatnogo zavoda.

ACC NR: AP6035898 SOURCE CODE: UR/0413/66/000/020/0137/0137

INVENTOR: Kolyadin, A. I.; Mukhina, T. I.; Klyuchnikov, V. V.

ORG: None

TITLE: A device for measuring the scattering coefficient of radiation. Class 42, No. 187356

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 137

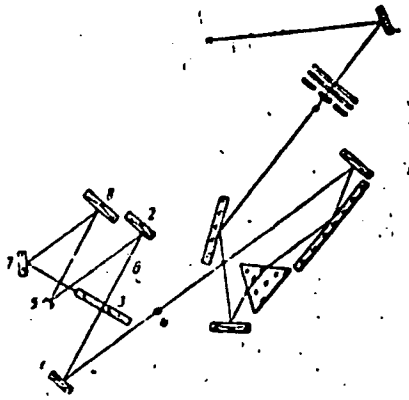
TOPIC TAGS: light scattering, radiation, measuring instrument, optic system

ABSTRACT: This Author's Certificate introduces: 1. A device for measuring the scattering coefficient of radiation. The installation contains a radiation source and receiver, monochromator and optical system for projecting the stream of radiation on the input slit. The range of angles at which the scattering coefficient can be measured in radiation of fixed wavelengths is expanded by using an optical system consisting of a parabolic and a spherical mirror or two spherical mirrors with the specimen between them in the form of a plane-parallel plate. The output slit of the monochromator is located at the main focus of the first mirror, while the radiation receiver is placed at the focus of the second. This receiver is mounted so that it may be moved in the focal plane. 2. A modification of this device for measuring radiation scattering coefficients at an angle of 90° to the surface of the specimen.

Card 1/2 UDC: 535.361.002.56

ACC NR: AP6035898

The unit has a trap mounted in the main channel and an auxiliary optical system made up of plane and spherical mirrors directing the given stream of radiation toward the receiver.



1—spherical or parabolic mirror; 2—spherical mirror; 3—specimen; 4—output slit; 5—receiver; 6—trap; 7—plane mirror; 8—spherical mirror

SUB CODE: 20/ SUBM DATE: 11Jun65

Card 2/2

MUKHINA, T. N.

"Kinematics of Mechanisms for Manufacturing Cams." Cand Tech Sci, Moscow Order of the Labor Red Banner Higher Technical School imeni Bauman, 24 Feb 54. Dissertation (Vechernyaya Moskva Moscow, 11 Feb 54)

SO: SUM 186, 19 Aug 1954

KARASEV, K.I.; MUKHINA, T.N.

Tagged atom technique for determining the effectiveness of fractionation of gaseous hydrocarbons. Trudy kom.anal.khim. 9:349-355 '58. (MIRA 11:11)
(Hydrocarbons) (Distillation, Fractional) (Radioactive tracers)

SOV/65-58-12-3/16

AUTHORS: Tyuryayev, I. Ya; Mukhina, T. N; Pavlova, V. B. and Kolyaskina, G. M.

TITLE: The Reaction Rate During Dehydrogenation of Propane on a Stationary Catalyst (Skorost' reaktsiy pri degidrirovanii propana na nepodvizhnom katalizatore)

PERIODICAL: Khimiya i Tekhnologiya Topliv i Masel, 1958, Nr 12, pp 9 - 15 (USSR)

ABSTRACT: During the catalytic dehydrogenation of propane, a number of side reactions take place which lead to the formation of methane, ethylene, ethane and a small quantity of C_4 hydrocarbons, as well as to the formation and deposition of coke on the catalyst. This reduces the yield of propylene and decreases the activity of the catalyst. It is necessary to know the reaction rates of the basic and side reactions as the rate of the basic reaction determines the yield of propylene during one throughput, and the rate of the side reactions the yield of propylene on the decomposed propane. The catalytic dehydrogenation of propane can be described by three reactions: dehydrogenation, cracking and coke formation. The kinetics of dehydrogenation of the lower paraffins has been described by many authors (Refs. 3 - 7), and the kinetics of thermal and catalytic cracking of

Card 1/3

The Reaction Rate During Dehydrogenation of Propane on a Stationary Catalyst

hydrocarbons was also investigated (Ref.1 and 9). The rate of coke formation on an aluminium-chrome catalyst was investigated during the dehydrogenation of n-butane. Propane was catalytically dehydrogenated in a quartz reactor (diameter equals 22mm). The temperatures were registered on the potentiometer PP. The catalyst granules had a diameter of 1 mm. 10 cm^3 of catalyst was used. The rates of dehydrogenation and cracking were defined at 550, 570 and 590°C when using practically pure propane, & the rate of coke deposition in a second series of experiments at 570, 580, 590, 600 and 610°C when using 94.9% propane. The dehydrogenation and cracking experiments were carried out for thirty minutes. The gas was analysed on a GIAP instrument and on a TsIATIM-51V device. During these experiments at decreased partial pressure, purified nitrogen was used as diluent. Results on the dehydrogenation of propane at atmospheric pressure are given in Table 1, and all further data necessary for calculating the coefficients of the kinetic equations in Figs.1, 2 and 3. Table 2: data for the graphical determination of the coefficients and values of these coefficients.

SOV/65-58-12-3/16

The Reaction Rate During Dehydrogenation of Propane on a Stationary Catalyst

Equations for calculating the rates of dehydrogenation, cracking and carbon deposition during the dehydrogenation of propane are given, as well as the dependence of the coefficients of these equations on the temperature. These equations form the basis for calculating the yields of propylene with regard to propane (for one cycle), with regard to the decomposed propane, and also the poisoning of the catalyst during various process conditions. There are 4 Figures, 2 Tables and 10 References: 4 English and 6 Soviet.

ASSOCIATION: NIISS

Card 3/3

SOV/64-59-3-4/24

5(1)
AUTHORS: Tyuryayev, I. Ya., Mukhina, T. N., Bushin, A. N., Gurina, P. S.

TITLE: Catalytic Dehydration of Propane Under Semi-industrial Conditions (Kataliticheskoye degidrirovaniye propana v poluprомyshlennykh usloviyakh)

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 3, pp 15 -16 (USSR)

ABSTRACT: Propylene, necessary for the synthesis of poly-propylene, glycerin, washing agents, and others, can be produced by means of a catalytic dehydration of propane, although a corresponding industrial production method is not yet worked out. Laboratory experiments in the NIISS showed that industrial catalysts used for butanhydration could also serve for propanhydration, with the output of propylene corresponding to the output of butylene in the first reaction. The optimum conditions and the output achieved in both cases of dehydration, are given (Table 1), both types of catalysts were developed in the institut imeni L. Ya. Karpova (Institute imeni L. Ya. Karpov), respectively in the VNIISK. The test results of the propanhydration achieved with a device already described, are given (Ref 1). The latter served for the dehydration of n-butane into butylene on movable

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ball catalysts (reactor diameter 500 mm, height of the catalyst layer appr. 1450 mm, volume - 270 l). The used gas had the following composition : 0.7 wt% of C_3H_6, 98.5 wt% of C_3H_8, 0.8 wt% of C_4. Datas on the catalyst activity are given, and also some test results with a better output (Table 3). The average of the heat effect of the dehydration reaction was found by means of 562 kcal/kg of the decomposed propane. A comparison is given (Ref 3) of the propylene output with that of butylene. It was found that it is possible to carry out the propanhydration on the same device as the n-butanhydration. There are 4 tables and 1 Soviet reference.

The Rate of Reaction During the Pyrolysis of Ethane

induction period can be observed during the dehydrogenation of ethane. The inhibition coefficient during the cracking reaction was found to be 0.88 . The dependence of the coefficient of rate of cracking on the temperature is shown in the form of a graph (Fig 2) as well as that of the coefficient of total decomposition of ethylene on the temperature in Fig 3. A stoichiometric equation for the total decomposition process (at 800°C) is calculated. This data can be used for estimating the parameters of tubular reactors (Ref 3 to 13). There are 3 figures, 1 table and 12 references, 4 of which are Soviet, 7 English and 1 German.

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Z/011/62/019/001/013/017
E073/E136

AUTHORS: Mukhina, T.N., and Pavlova, V.B.

TITLE: Low-octane benzines from platforming and hydroforming as raw material for producing lower olefins

PERIODICAL: Chemie a chemická technologie. Přehled technické a hospodářské literatury, v.19, no.1, 1962, 34, abstract Ch 62-474. (Neftekhimiya, v.1, no.3, 1961, 382-385)

TEXT: Optimum conditions of pyrolysis of benzines to ethyl, propyl, butylene, divinyl and aromatic hydrocarbons are dealt with. The possibility of industrial utilization of the process is considered.
2 figures, 2 tables.

[Abstractor's note: Complete translation.]

Card 1/1

MAYOROV, V.I.; MUKHINA, T.N.

Equipment for manufacturing ethylene and acetylene by the process of hydrocarbon homogenous pyrolysis. Gaz. prom. 6 no.12:42-46 '61. (MIRA 15:2)
(Acetylene) (Ethylene)

S/064/62/000/002/002/008
B101/B144

AUTHORS: Mukhina, T. N., Lesokhina, G. F., Itsek, S. Ye.

TITLE: Pyrolysis of straight-run low octane number gasoline to butylenes, divinyl and aromatic hydrocarbons

PERIODICAL: Khimicheskaya promyshlennost', no. 2, 1962, 4 - 6

TEXT: Gasoil from the Romashkino deposit (specific weight 0.730, mean molecular weight 105) was submitted to pyrolysis in a laboratory apparatus. The pyrogas was analyzed chromatographically with an A -2 (KhPA-2) apparatus. Results: (1) The optimum butylene yield was obtained with 25% admixture of water vapor at 725°C and a contact duration of 0.5 - 1 sec, 7.8%. 750°C and a contact duration of 0.5 - 1 sec were the optimum for high butadiene yield: olefin yield about 51%, butadiene content in the C_4 fraction 30.4%. (2) Aromatization took place under conditions under which a pyrogas rich in olefins developed simultaneously. No water vapor was added. (a) Single-stage process: At 750°C, contact duration 4.0 sec, 8.5% benzene related to the initial gasoline was obtained. The benzene fraction contained 95.0% C_6H_6. At 750°C and contact duration

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MUKHINA, T.N.; LESOKHINA, G.F.; ITSEK, S.Ye.

Low octane straight-run gasoline decomposed by pyrolysis into butylenes, bivinyl, and aromatic hydrocarbons. Khim. prom. no.2:80-82 F '62. (MIRA 15:2)
(Gasoline) (Butadiene)
(Butene)

containing more than 50% of compounds capable of being sulphonated. The condensate has the research octane number of 84. The hydrogenated condensate resulting from the ethylenic regime pyrolysis has the "research" octane number of 99. It is concluded that the pyrolysis of benzenes gives a more flexible product distribution than that of n-butane or propane and may be economically advantageous. There is 1 table.

ASSOCIATION: Nauchno-issledovatel'skiy institut sinteticheskikh spirtov i organicheskikh produktov (Scientific Research Institute of Synthetic Alcohols and Organic Products)

FEYGIN, Ye. A.; PLATONOV, V. M.; MUKHINA, T. N.; BARABANOV, N. L.

Calculating the process of ethane pyrolysis by means of the "Ural-1" electronic digital computer. Neftekhimia 2 no.4: 498-506 Jl-Ag '62. (MIRA 15:10)

1. Nauchno-issledovatel'skiy institut sinteticheskikh spirtov i organicheskikh produktov.

(Ethane) (Pyrolysis)

MUKHINA, T.N.; ITSEK, S.Ye.

Effect of the fractional composition of gasolines on their pyrolysis products. Neftekhimiia 2 no.5:723-729 S-O '62. (MIRA 16:1)

1. Nauchno-issledovatel'skiy institut sinteticheskikh spirtov i organicheskikh produktov.
(Gasoline) (Pyrolysis)

FEYGIN, Ye.A.; PLATONOV, V.M.; MUKHINA, T.N.; GIRSANOV, I.V.

Methods for the optimal design of the coil of a pyrolysis furnace. Khim.prom. no.7:519-526 Jl '63. (MIRA 16:11)

1. Moskovskiy gosudarstvennyy universitet (for Girsanov).

GORISLAVETS, S.P. [Horyslavets', S.P.], kand. tekhn. nauk; KOZHAN, A.P., kand. tekhn. nauk; MAYOROV, V.I., kand. tekhn. nauk; MUKHINA, T.N. [Mukhina, T.M.], kand. tekhn. nauk; ARTYUKHOV, I.M., kand. tekhn. nauk

Block steam superheaters. Khim. prom. no.4:29-30 O-D '64.
(MIRA 18:3)

KRICHKO, A.A.; VOL'-EPSHTEYN, A.B.; MUKHINA, T.N.; BERENTS, A.D.

Production of aromatic hydrocarbons from pyrocondensate. Khim.i tekh.topl. i masel 10 no.1:9-11 Ja '65. (MIRA 18:4)

1. Institut goryuchikh iskopayemykh i Nauchno-issledovatel'skiy institut sinteticheskikh spirtov i organicheskikh produktov.

MUKHINA, T.N.; BRAGINSKIY, O.B.; MAKAROV, O.V.; MAYOROV, V.I.

Effect of pressure on the pyrolysis of straight-run gasoline in a current of super-heated water vapor. Neftepor. i neftekhim. no.3:10-12 '65. (MIRA 18:5)

1. Nauchno-issledovatel'skiy institut sinteticheskikh spirtov.

VOL'-EPSHTEYN, A.B.; ZABRYANSKIY, Ye.I.; KRICHKO, A.A.; LESOKHINA, G.F.; MALYAVINSKIY, L.V.; MUKHINA, T.N.; ROBERT, Yu.A.

Production and motor properties of gasolines from pyrolysis products. Khim. i tekh. topl. i masel 9 no.5:23-29 5 My'64 (MIRA 17:7)

1. Institut goryuchikh iskopayemykh AN SSSR, Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva i Nauchno-issledovatel'skiy institut sinteticheskogo spirta.

VOLAROVICH, M.P.; MUKHINA, T.S.; TROPIN, V.P.; CHURAYEV, N.V.

Electron microscopy of peat and its components. Koll. zhur. 22 no. 5:553-556 S-O '60. (MIRA 13:10)

1. Kalininskiy torfyanoy institut.
(Peat)

MATUSEVICH, M.G., kand. ekon. nauk; PASHKEVICH, O.N.; MUKHINA, V.A., mlad. nauchnyy sotr.; MARKOVA, K.Ye., kand. ekon. nauk; SAVEL'YEV, I.T., mlad. nauchnyy sotr.; MERETSKAYA, T.A., kand. ekon. nauk; D'YAKOV, B.I., mlad. nauchnyy sotr.; TIMOFEYEV, L., red.; VOLOKHANOVICH, I., tekhn. red.

[Capital assets of industry and their utilization] Osnovnye fondy promyshlennosti i ikh ispol'zovanie. Minsk, Izd-vo Akad. nauk BSSR, 1960. 202 p. (MIRA 16:6)

1. Akademiya navuk BSSR, Minsk. Instytut ekonomiki. 2. Institut ekonomiki AN BSSR (for all except Timofeyev, Volokhanovich).
(White Russia—Capital)

BATKIN, A.A. (Leningrad S-36, 4-ya Sovetskaya ul. d.8, kv.7); MUKHINA, T.V.

Abstracts. Ortop., travm. i protez. 25 no.11:68 N '64.
(MIRA 18:11)

1. Iz khirurgicheskoy kliniki (nachal'nik - prof. T.Ya. Ar'yev) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.
Submitted April 8, 1963.

MUKHINA, V.A., starshiy inzh.-tekhnolog

Advantages of consolidating small finishing enterprises. Tekst.-prom. 22 no.1:19-20 Ja '62. (MIRA 15:2)

1. Institut ekonomiki AN BSSR.
(Textile industry)